Unpacking the 2016 TOK Essays

Essay Title:

“In knowledge there is always a trade-off between accuracy and simplicity.” Evaluate this statement in relation to two areas of knowledge

Unpacking:

1. Identify the command terms and describe what that term(s) requires you to do!

The command term of this essay topic is “**evaluate”**. Evaluate by definition asks you to make an appraisal by weighing up the strengths and limitations. In this case, it asks how true the statement is, based on the support from two areas of knowledge. Some sort of conclusion should be made on the basis of the areas of knowledge. Then, the essay should further evaluate the statement in the context of application. For example, if the derived conclusion was “yes indeed there is always a trade-off between accuracy and simplicity in knowledge,” then how does this TOK concept have practical application. Its applicability should also be evaluated.



1. Identify key words and phrases

The key words and phrases of the essay title are the following: always, trade-off, accuracy, simplicity, evaluate, in relation to two areas of knowledge.

The statement claims that there is **always** a trade-off, meaning that the claim itself is placed at one extreme end of the spectrum. For this statement to be true there should be no cases that both accuracy and simplicity can increase simultaneously.

The main emphasis of the statement is placed on the word **trade-off**. The statement doesn’t mean that accuracy and simplicity cannot co-exist, but rather, to increase accuracy, simplicity has to be compromised, and vice versa. Knowledge can be, to a certain extent, both accurate and simple. However, the statement claims that knowledge, under no circumstance, can both be gaining accuracy and simplicity.

Why “**accuracy**” and “**simplicity**” are key words and phrases of the essay title is obvious. It’s these two key concepts that you want to place your emphasis when you investigate different examples, so that you can stay focused on answering the essay title, than going off-topic.

As mentioned, the command term of **evaluate** requires you to do specific tasks. This is a key word because it forms the basic structure of your essay, and you want to look at examples and the statement itself with a broader perspective, as evaluate requires you to look at both sides of an argument (you can’t evaluate a statement by just looking at its strengths).

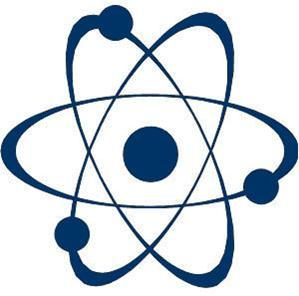
Lastly, the essay specifically asks you answer the title “**in relation to two areas of knowledge.**” You obviously want to follow what the title asks you to do. Additionally, this phrase is important because it forces you to cleverly choose the two areas of knowledge that best-fit the question. If you don’t wisely choose your area of knowledge, you might quickly run out of things to say, or only have superficial demonstration of your knowledge of the essay title.

1. Identify AOKs present

Human Science is a great area where it validates the statement “In knowledge there is always a trade-off between accuracy and simplicity.” By definition, human science is the study and interpretation of the experiences, activities, constructs and artifacts associated with human beings. We, as humans, know that we are very complicated beings, in all respect and when it comes to subjects such as psychology, there is a great amount of struggle between accuracy and simplicity. In psychology, models serve to explain, justify and predict behaviors. However, because humans are such complicated beings, there are many aspects in psychology that we are not clear in, such as the influence of biological, cognitive and sociocultural factors on our behavior. There have been multiple theories that tried to provide answers to these unobservable phenomena. However, as mentioned, because humans are extremely complicated and unique behaviors, that is, someone’s behavior might be more influenced by his/her emotion that his/her upbringing, whereas someone else’s behavior is a direct result of peer pressure, models become extremely complicated when they try to account for all variations of human, or in other words, accurate. Thus, in psychology (or at least in IB-psychology taught in high school level), most models are relatively simple, so that it enhances our understanding of such phenomena. However, whenever a model becomes simple, it sacrifices a lot of reliability and applicability, because it is inaccurate in essence. They fail to accurately encompass all of the factors that influence one’s behavior, thus it is hard to apply knowledge obtained from such simple models to the real world.



Another AOK that is great for validating the statement is natural science. In the universe, there are great amounts of randomness and chaos that cannot be predicted, yet models attempted to explain or predict certain phenomena under such chaos disregards any probabilistic/random element. For example, the concept of radioactive decay is a probability that a radioactive element will release energy to become stable. Although the model for radioactive decay is extremely simple (simply involving balancing atomic and mass numbers through alpha, beta and gamma radiations), since the process is entirely random and based on statistics, the model itself is very inaccurate because it does not take into account the probability that it will not decay. Furthermore, many formulas in physics have underlying assumptions that are largely untrue in the real world. For example, the equation of  assumes that acceleration of the object is constant, which is largely untrue due to resisting forces such as air resistance and friction. However, because the equation itself is so beautifully simple, in conceptual physics, these “inaccurate” formulas are preferred over complicated formulas that take into account multiple real-life components.



1. Identify WOKs present

Since the question asked specifically to only refer to AOKs, no WOKs are present or will be used to elucidate discussion.

1. What are the knowledge issues?

Is it ethically just to apply “untrue” knowledges in areas where we’re dealing with human lives, or when the consequences are severe?

To what extent can we sacrifice accuracy for knowledge that we apply in real world?

Should accuracy of knowledge in any circumstances be compromised?

1. What assumptions are present?

The most obvious assumption of the statement is that there are no cases that both accuracy and simplicity increase simultaneously. Another assumption is that the piece of information we’re dealing with is actually knowledge, in TOK terms. Thus, if we demonstrate that accuracy and simplicity can increase simultaneously with something that doesn’t meet the criterion for qualifying as knowledge (for example, one definition of knowledge in TOK is ‘a true, justified belief’), then our point has no effect in supporting our claim. Lastly, since the topic asks us to evaluate the statement only in relations to areas of knowledge, it is assumed that the ways of knowing have negligible effect on deciding whether in knowledge itself always exists such trade-off.